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09/655,987	09/06/2000	Calvin B. Ward	54391	9378

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San Ramon, CA 94583

EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/655,987

Applicant(s)

WARD, CALVIN B.

Examiner

Tamra L. Dicus

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Reopening of Prosecution After Appeal

1. In view of the appeal brief filed on 9-1-03, PROSECUTION IS HEREBY REOPENED.

A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Art Unit: 1774

3. Claims 19 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,804,512 to Lickfield et al.

Lickfield discloses a nonwoven laminate. The laminate is structured as follows: layer 12 is an electret material (permanently containing electrostatic charges) adjacent to layer 14. See col. 4, lines 35-60. While layer 14 is not described by Lickfield as an absorbent material, layer 14 is comprised of various natural or synthetic fibers having hydrophilic/hydrophobic properties. Such fibers include cotton, wool, rayon, or acrylic fibers (col. 4, lines 10-15). Such fibers as cotton inherently function to absorb liquid and layer 14 would be considered an absorbent layer because layer 14 is made entirely of such fibers. See also col. 3, lines 55-68. The Examiner respectfully submits Applicant's absorbent material does not claim any absorbency percentage in use. The material of 12 is of a nonwoven fibrous web of polyolefin resins (col. 4, lines 35-45). Layer 14 may also comprise polyolefin resins. Layers 12 and 14 are bonded by various techniques (providing bonded limitation of instant claim 27) at col. 4, lines 59-60. The limitation that the absorbent layer is "for protecting an exposed surface" is not a patentable limitation. Since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Since Lickfield employs the same materials as Applicant, it is inherent that the Lickfield article functions in the same manner as claimed by applicant. Lickfield discloses using the nonwoven laminate in filtration media which includes articles such as diapers, pads, surgical gowns, industrial garments and such at col. 1, lines 10-30. At col. 8, lines 38-50 and col. 9, lines 12-20, layer 14 may be combined with a nonwoven meltblown web on outer side 14.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 5,730,922 to Babb et al.

Lickfield is relied upon above. Lickfield does not disclose absorbent layer 14 comprising paper or a fibrous mat. Babb teaches a composite laminate sheet comprising a layer of polymeric material such as perfluorocyclobutane adhering to nonwoven or woven porous layers of paper (as per instant claim 20), fibrous glass or non-woven fiber mats (as per instant claim 23), or polyester material (absorbent layer). See col. 2, lines 1-65, col. 13, line 45- col. 14, line 5, and col. 15, lines 25-60. Within col. 2, Babb discloses the various aforementioned layers may be of different fibrous structures e.g. fiber mats, porous nonwoven/wovens depending upon the desired application. At col. 1, lines 14-40 Babb points to the various forms of laminates. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to comprise materials such as paper or fibrous mats because Babb teaches laminates are conventional to use such structures dependent upon the desired application, the same as Applicant requires.

Art Unit: 1774

6. Claims 21 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 4,828,582 to Hermann.

7. Lickfield is relied upon above. Lickfield does not teach cells for containing liquid or an open cell foam. Hermann discloses a foam substrate and micropackaged active ingredient particle composite dispensing materials. Hermann employs foam polymerization to form an open cell foam substrate at col. 6, lines 55-65 for providing extra strength to a material. See Figure 1 illustrating the plurality of open cells (instant claim 28). Hermann's foam provides softness also at col. 7, line 13 which may contain polypropylene, polyethylene or other ingredients to provide protection against a number of environmental effects including sunlight or contamination. See further col. 7, lines 14-25. Further at col. 11, lines 45-55, the open cell foam is filled with liquid within fibrous or fabric material and bonded to the open foam substrate. Therefore, it would have been obvious to one of ordinary skill in the art to modify the article of Brown to include cells or an open cell foam since Hermann teaches doing so provides extra strength to a material, to contain liquid within the cells, or to provide protection against a number of environmental effects including sunlight or contamination as cited above.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 4,828,582 to Hermann and further in view of USPN 5,807,366 to Milani.

Lickfield is relied upon above. Lickfield does not teach an open cell foam is electrostatically charged. Milani teaches an absorbent article having a particle size gradient. The absorbent of Milani comprises nonwoven materials of various polymers and papers listed at col. 10, line 46-col. 11, line 40, col. 12, line 35-56, col. 13, lines 1-10. Milani employs exposing

Art Unit: 1774

absorbent particles to electrostatic charging, including other portions of the absorbent article, such as loose fibers, fiber webs, foams, and films, which may also be electrostatically charged. Further describing fibers or web may be charged such that the fibers or web repel the absorbent particles and improves liquid distribution. See col. 13, lines 25-45. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to further include electrostatically charging an absorbent layer of foam because Milani teaches doing so provides liquid barrier functionality and liquid distribution improvement, the same as Applicant requires.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 5,730,922 to Babb et al. and further in view of USPN 5,807,366 to Milani.

Lickfield and Babb are relied upon above. Lickfield does not teach an absorbent mat is electrostatically charged. Milani teaches an absorbent article having a particle size gradient. The absorbent of Milani comprises nonwoven materials of various polymers and papers listed at col. 10, line 46-col. 11, line 40, col. 12, line 35-56, col. 13, lines 1-10. Milani employs exposing absorbent particles to electrostatic charging, including other portions of the absorbent article, such as loose fibers, fiber webs, foams, and films, which may also be electrostatically charged. Further describing fibers or web may be charged such that the fibers or web repel the absorbent particles and improves liquid distribution. See col. 13, lines 25-45. While Milani does not state fibrous mats may be electrostatically charged, it is obvious that charging a fibrous mat would be included by Milani because Milani teaches fibers in various forms may be electrostatically charged. The fibers that are contained in a fibrous mat would function in the same way Applicant intends because the same base materials e.g. fibers and same process e.g.

Art Unit: 1774

electrostatically charging are employed by Milani. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to further include electrostatically charging an absorbent mat because Milani teaches doing so provides liquid barrier functionality and liquid distribution improvement, the same as Applicant requires.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 6,261,679 to Chen et al.

9. Lickfield is relied upon above. Lickfield does not disclose a plurality hydrophobic barrier cells within an absorbent layer. Chen teaches a fibrous absorbent material. Chen discloses absorbent hydrophobic foam-fiber composites having a cell structure where other nonwoven layers can be attached at col. 14, lines 12-35 and Figures 1-3, which produces the product as described in Applicant's instant claim 25. Chen teaches the fibers are of cellulosic or papermaking fibers, or of polymers. See col. 11, lines 55-68. The advantages for making such a structure include suitable wet resiliency, effective absorption of fluids, maintaining integrity and shape, providing flexibility, conformability, and softness (see col. 14, lines 39-50). See also col. 15, lines 45-55 teaching motivation for providing open-cell foams in absorbent fibrous structures for creating void space. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to include a plurality of hydrophobic barrier cells within an absorbent layer because Chen provides the advantages of suitable wet resiliency, effective absorption of fluids, maintaining integrity and shape, providing flexibility, conformability, and softness (see col. 14, lines 39-50).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 3,838,692 to Levesque.

Lickfield is relied upon above. Lickfield does not teach a hydrophobic layer with pores over an absorbent layer. Levesque teaches a hydrophobic sheet with hydrophilic passages. Levesque discovered a porous hydrophobic sheet that allows liquids to permeate through it to an under absorbent layer in order to retain the liquid in the absorbent material (same reason as Applicant provides). The hydrophobic sheet is of hydrophobic fibers of pulp or polyolefin types. See col. 1, lines 5-20, lines 30-45, col. 2, lines 5-10, col. 3, lines 43-56, and col. 4, lines 5-15. The hydrophobic sheet may be a separate layer or a composite of multilayers forming an outer covering bonded to the absorbent or included in the absorbent material itself. See col. 4, lines 35-50 and Example 1. Hence, it would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to include a hydrophobic porous top sheet as instant claims 8 and 26 because Levesque teaches doing so in order to retain the liquid in the absorbent material as cited above.

10. Further regarding claim 26, that the pores are “allowing liquid to penetrate...”, is not a positive recitation and does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

11. Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view USPN 6,261,679 to Chen et al.

12. Lickfield discloses a nonwoven laminate. The laminate is structured as follows: layer 12 is an electret material (permanently containing electrostatic charges) adjacent to layer 14. See col. 4, lines 35-60. While layer 14 is not described by Lickfield as an absorbent material, layer 14 is comprised of various natural or synthetic fibers having hydrophilic/hydrophobic properties. Such fibers include cotton, wool, rayon, or acrylic fibers (col. 4, lines 10-15). Such fibers as

Art Unit: 1774

cotton inherently function to absorb liquid and layer 14 would be considered an absorbent layer because layer 14 is made entirely of such fibers. See also col. 3, lines 55-68. The Examiner respectfully submits Applicant's absorbent material does not claim any absorbency percentage in use. The material of 12 is of a nonwoven fibrous web of polyolefin resins (col. 4, lines 35-45). Layer 14 may also comprise polyolefin resins. Layers 12 and 14 are bonded by various techniques at col. 4, lines 59-60. The limitation that the absorbent layer is "for protecting an exposed surface" is not a patentable limitation. Since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Since Lickfield employs the same materials as Applicant, it is inherent that the Lickfield article functions in the same manner as claimed by applicant. Lickfield discloses using the nonwoven laminate in filtration media which includes articles such as diapers, pads, surgical gowns, industrial garments and such at col. 1, lines 10-30. At col. 8, lines 38-50 and col. 9, lines 12-20, layer 14 may be combined with a nonwoven meltblown web on outer side 14.

Lickfield does not disclose an absorbent layer with a plurality of cells (instant claim 1) or paper (instant claim 2) or define an open foam cell sheet (instant claim 3). Lickfield does not disclose a plurality hydrophobic barrier cells within an absorbent layer (instant claim 7). Chen teaches a fibrous absorbent material. Chen discloses absorbent hydrophobic foam-fiber composites having a cell structure where other nonwoven layers can be attached at col. 14, lines 12-35 and Figures 1-3, which produces the product as described in Applicant's instant claim 7. Chen teaches the fibers are of cellulosic or papermaking fibers, or of polymers (instant claim 2).

Art Unit: 1774

See col. 11, lines 55-68. The advantages for making such a structure include suitable wet resiliency, effective absorption of fluids, maintaining integrity and shape, providing flexibility, conformability, and softness (see col. 14, lines 39-50). See also col. 15, lines 45-55 teaching motivation for providing open-cell foams in absorbent fibrous structures for creating void space. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to include paper or a plurality of hydrophobic barrier cells within an absorbent layer because Chen provides the advantages of suitable wet resiliency, effective absorption of fluids, maintaining integrity and shape, providing flexibility, conformability, and softness (see col. 14, lines 39-50). It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to include open cell foam because Chen teaches open-cell foams in absorbent fibrous structures for creating void space.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view USPN 6,261,679 to Chen et al. and further in view of USPN 5,807,366 to Milani.

Lickfield is relied upon above. Lickfield does not teach an open cell foam is electrostatically charged. Milani teaches an absorbent article having a particle size gradient. The absorbent of Milani comprises nonwoven materials of various polymers and papers listed at col. 10, line 46-col. 11, line 40, col. 12, line 35-56, col. 13, lines 1-10. Milani employs exposing absorbent particles to electrostatic charging, including other portions of the absorbent article, such as loose fibers, fiber webs, foams, and films, which may also be electrostatically charged. Further describing fibers or web may be charged such that the fibers or web repel the absorbent particles and improves liquid distribution. See col. 13, lines 25-45. It would have been obvious

Art Unit: 1774

to one of ordinary skill in the art to modify the laminate of Lickfield to further include electrostatically charging an absorbent layer of foam because Milani teaches doing so provides liquid barrier functionality and liquid distribution improvement, the same as Applicant requires.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 6,261,679 to Chen et al. and further in view USPN 5,730,922 to Babb et al.

Lickfield and Chen are relied upon above. Lickfield does not disclose absorbent layer 14 comprising a fibrous mat. Babb teaches a composite laminate sheet comprising a layer of polymeric material such as perfluorocyclobutane adhering to nonwoven or woven porous layers of paper, fibrous glass or non-woven fiber mats (as per instant claims 5-6), or polyester material (absorbent layer). See col. 2, lines 1-65, col. 13, line 45- col. 14, line 5, and col. 15, lines 25-60. Within col. 2, Babb discloses the various aforementioned layers may be of different fibrous structures e.g. fiber mats, porous nonwoven/wovens depending upon the desired application. At col. 1, lines 14-40 Babb points to the various forms of laminates. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to comprise materials such as fibrous mats because Babb teaches laminates may include such structures dependent upon the desired application, the same as Applicant requires.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 6,261,679 to Chen et al. and further in view USPN 5,730,922 to Babb et al. and USPN 5,807,366 to Milani.

Lickfield and Chen are relied upon above. Lickfield does not teach an absorbent mat is electrostatically charged. Milani teaches an absorbent article having a particle size gradient. The

Art Unit: 1774

absorbent of Milani comprises nonwoven materials of various polymers and papers listed at col. 10, line 46-col. 11, line 40, col. 12, line 35-56, col. 13, lines 1-10. Milani employs exposing absorbent particles to electrostatic charging, including other portions of the absorbent article, such as loose fibers, fiber webs, foams, and films, which may also be electrostatically charged. Further describing fibers or web may be charged such that the fibers or web repel the absorbent particles and improves liquid distribution. See col. 13, lines 25-45. While Milani does not state fibrous mats may be electrostatically charged, it is obvious that charging a fibrous mat would be included by Milani because Milani teaches fibers in various forms may be electrostatically charged. The fibers that are contained in a fibrous mat would function in the same way Applicant intends because the same base materials e.g. fibers and same process e.g. electrostatically charging are employed by Milani. It would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to further include electrostatically charging an absorbent mat because Milani teaches doing so provides liquid barrier functionality and liquid distribution improvement, the same as Applicant requires.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,804,512 to Lickfield et al. in view of USPN 6,261,679 to Chen et al. and further in view of USPN 3,838,692 to Levesque.

Lickfield and Chen are relied upon above. Lickfield does not teach a hydrophobic layer with pores over an absorbent layer. Levesque teaches a hydrophobic sheet with hydrophilic passages. Levesque discovered a porous hydrophobic sheet that allows liquids to permeate through it to an under absorbent layer in order to retain the liquid in the absorbent material (same reason as Applicant provides). The hydrophobic sheet is of hydrophobic fibers of pulp or

Art Unit: 1774

polyolefin types. See col. 1, lines 5-20, lines 30-45, col. 2, lines 5-10, col. 3, lines 43-56, and col. 4, lines 5-15. The hydrophobic sheet may be a separate layer or a composite of multilayers forming an outer covering bonded to the absorbent or included in the absorbent material itself. See col. 4, lines 35-50 and Example 1. Hence, it would have been obvious to one of ordinary skill in the art to modify the laminate of Lickfield to include a hydrophobic porous top sheet as instant claims 8 and 26 because Levesque teaches doing so in order to retain the liquid in the absorbent material as cited above.

13. Further regarding claim 8, that the pores are “allowing liquid to penetrate ...”, is not a positive recitation and does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

14. Claims 1-3, 5, 19-21, 23, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,730,922 to Babb et al. in view of USPN 4,828,582 to Hermann.

Babb teaches a composite laminate sheet comprising a layer of polymeric material such as perfluorocyclobutane adhering to nonwoven or woven porous layers of paper (as per instant claims 2 and 20), fibrous glass mats (as per instant claims 5-6 and 23-24), or polyester material (absorbent layer). The outer layer may provide adhesion characteristics via a surface treatment such as a corona discharging method (providing an electrostatically charged sheet by Applicant's same process). The limitation that the absorbent layer is “for containing liquid spilled on said absorbent layer” is not a patentable limitation. Since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural

Art Unit: 1774

limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). See col. 2, lines 1-65, col. 13, line 45-col. 14, line 5, and col. 15, lines 25-60.

Babb does not disclose an absorbent layer with a plurality of cells (instant claims 1 or 28) or define an open foam cell sheet (instant claim 2 or 21). Hermann discloses a foam substrate and micropackaged active ingredient particle composite dispensing materials. Hermann employs foam polymerization to form an open cell foam substrate at col. 6, lines 55-65 for providing extra strength to a material. See Figure 1 illustrating the plurality of open cells. Hermann's foam provides softness also at col. 7, line 13 which may contain polypropylene, polyethylene or other ingredients to provide protection against a number of environmental effects including sunlight or contamination. See further col. 7, lines 14-25. Further at col. 11, lines 45-55, the open cell foam is filled with liquid within fibrous or fabric material and bonded to the open foam substrate. Therefore, it would have been obvious to one of ordinary skill in the art to modify the article of Babb to include an open cell foam since Hermann teaches doing so provides extra strength to a material, to contain liquid within the cells, or to provide protection against a number of environmental effects including sunlight or contamination as cited above.

15. Claims 4, 6, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,730,922 to Babb et al. in view of in view of USPN 4,828,582 to Hermann and further in view of USPN 5,807,366 to Milani.

Babb is relied upon above. Babb does not teach the absorbent mat or foam is electrostatically charged. Milani teaches an absorbent article having a particle size gradient. The absorbent of Milani comprises nonwoven materials of various polymers and papers listed at col. 10, line 46-col. 11, line 40, col. 12, line 35-56, col. 13, lines 1-10. Milani employs exposing

Art Unit: 1774

absorbent particles to electrostatic charging, including other portions of the absorbent article, such as loose fibers, fiber webs (inclusive of mat), foams, and films, which may also be electrostatically charged. Further describing fibers or web may be charged such that the fibers or web repel the absorbent particles and improves liquid distribution. See col. 13, lines 25-45. It would have been obvious to one of ordinary skill in the art to modify the composite of Babb to further include electrostatically charging an absorbent layer because Milani teaches doing so provides liquid barrier functionality and liquid distribution improvement as cited above.

Claims 7 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,730,922 to Babb et al. in view of USPN 4,828,582 to Hermann and further in view of USPN 6,261,679 to Chen et al.

Babb is relied upon above. Babb does not disclose a plurality hydrophobic barrier cells within an absorbent layer. Chen teaches a fibrous absorbent material. Chen discloses absorbent hydrophobic foam-fiber composites having a cell structure where other nonwoven layers can be attached at col. 14, lines 12-35 and Figures 1-3, which produces the product as described in Applicant's instant claims 7 and 25. Chen teaches the fibers are of cellulosic or papermaking fibers, or of polymers. See col. 11, lines 55-68. The advantages for making such a structure include suitable wet resiliency, effective absorption of fluids, maintaining integrity and shape, providing flexibility, conformability, and softness (see col. 14, lines 39-50). See also col. 15, lines 45-55 teaching motivation for providing open-cell foams in absorbent fibrous structures for creating void space. It would have been obvious to one of ordinary skill in the art to modify the composite of Babb to include a plurality of hydrophobic barrier cells within an absorbent layer because Chen provides the advantages of suitable wet resiliency, effective absorption of fluids,

Art Unit: 1774

maintaining integrity and shape, providing flexibility, conformability, and softness (see col. 14, lines 39-50).

Claims 8 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,730,922 to Babb et al. in view of USPN 4,828,582 to Hermann and further in view of USPN 3,838,692 to Levesque.

Babb is relied upon above. Babb does not teach a hydrophobic layer with pores over an absorbent layer. Levesque teaches a hydrophobic sheet with hydrophilic passages. Levesque discovered a porous hydrophobic sheet that allows liquids to permeate through it to an under absorbent layer in order to retain the liquid in the absorbent material (same reason as Applicant provides). The hydrophobic sheet is of hydrophobic fibers of pulp or polyolefin types. See col. 1, lines 5-20, lines 30-45, col. 2, lines 5-10, col. 3, lines 43-56, and col. 4, lines 5-15. The hydrophobic sheet may be a separate layer or a composite of multilayers forming an outer covering bonded to the absorbent or included in the absorbent material itself. See col. 4, lines 35-50 and Example 1. Hence, it would have been obvious to one of ordinary skill in the art to modify the laminate of Babb to include a hydrophobic porous top sheet as instant claims 8 and 26 because Levesque teaches doing so in order to retain the liquid in the absorbent material as cited above.

Further regarding claims 8 and 26, that the pores are “allowing liquid to penetrate ...”, is not a positive recitation and does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Response to Arguments

Babb is used to teach the laminate structure. Hermann is maintained in the rejection to teach the open cell foam structure. That Applicant asserts Hermann uses open cell foam differently from Barby is not convincing because use is of no consequence to patentability. The same polymeric materials are employed, thereby motivation exists to combine. The Applicant alleges Barby does not use the fibrous mat as an absorptive layer. The Examiner does not agree. Barby has upper and lower substrates of fibrous polymeric material which functions as an absorptive layer. See Figure 2.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- USPN 5,998,308 to Cohen teaches nonwoven webs, fibers, and laminates may be subjected to electrostatic charging by corona discharge to the entire laminate or the individual layers of the laminate for liquid barrier control.
- USPN 5,112,677 to Tani et al. teaches an electret sheet and method where electrical fields are applied to fibrous nonwovens producing electrostatically charged sheets.
- USPN 5,496,627 to Bagrodia et al. teaches a composite fibrous filters providing electrostatic charges.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

Art Unit: 1774

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-8329.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tamra L. Dicus
Examiner
Art Unit 1774

November 19, 2003

CYNTHIA M. KELLY
EXAMINER
TECHNOLOGY CENTER 1700
